

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently amended) A wound dressing material for controlled activation of a wound healing therapeutic compound in the presence of a protease enzyme in a wound fluid, the material comprising: a medically acceptable polymer; a wound healing therapeutic agent; an inhibitor of the protease enzyme; and a linker group which is cleavable by the protease enzyme, wherein the wound healing therapeutic agent and the inhibitor are each separately conjugated to the medically acceptable polymer by the linker group, further wherein the activities of both the wound healing therapeutic agent and the inhibitor are increased by contacting the wound dressing material with a wound fluid containing the protease enzyme.
2. (Canceled) ~~A wound dressing material according to claim 1, wherein the wound healing therapeutic agent and the inhibitor are dispersed in a matrix of the medically acceptable polymer, and the polymer comprises the linker group.~~
3. (Currently amended) A wound dressing material according to ~~claim 2~~ claim 1, wherein the polymer is cross-linked by the linker group.
4. (Canceled) ~~A wound dressing material according to claim 1, wherein the wound healing therapeutic agent and/or the inhibitor are conjugated to the medically acceptable polymer by the linker group.~~

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5. (Withdrawn) A wound dressing material according to claim 1, wherein the wound healing therapeutic agent is conjugated to the inhibitor by the linker group.
6. (Original) A wound dressing material according to claim 1 wherein elevated levels of the enzyme are associated with pain, wound infection or wound chronicity.
7. (Previously presented) A wound dressing material according to claim 1, wherein the enzyme is a protease, and the linker group comprises an oligopeptidic sequence which is a substrate for the protease.
8. (Previously presented) A wound dressing material according to claim 7, wherein the protease is elastase and wherein the oligopeptidic sequence comprises or consists of lys-gly-ala-ala-ala-lys-Ala-Ala-Ala- (SEQ ID NO:1), Ala-Ala-Pro-Val (SEQ ID NO:2), Ala-Ala-Pro-Leu (SEQ ID NO:3), Ala-Ala-Pro-Phe (SEQ ID NO:4), Ala-Ala-Pro-Ala (SEQ ID NO:5) or Ala-Tyr-Leu-Val (SEQ ID NO:6).
9. (Withdrawn) A wound dressing material according to claim 7, wherein the protease is a matrix metalloproteinase and wherein the oligopeptidic sequence comprises or consists of -Gly-Pro-Y-Gly-Pro-Z- (SEQ ID NO:7), -Gly-Pro-Leu-Gly-Pro-Z- (SEQ ID NO:8), -Gly-Pro-Ile-Gly-Pro-Z- (SEQ ID NO:9), or -Ala-Pro-Gly-Leu-Z- (SEQ ID NO:10), where Y and Z are amino acids.
10. (Withdrawn) A wound dressing material according to claim 7, wherein the protease is a collagenase and wherein the oligopeptidic sequence comprises or consists of -Pro-Leu-Gly-Pro-D-Arg-Z- (SEQ ID NO:11), -ProLeu-Gly-Leu-Leu-Gly-Z- (SEQ ID NO:12), -Pro-Gln-Gly-Ile-Ala-Gly-Trp- (SEQ ID NO:13), -Pro-Leu-Gly-Cys (Me)-His- (SEQ ID

NO:14), -Pro- Leu-Gly-Leu-Trp-Ala- (SEQ ID NO:15), -Pro-Leu-Ala-Leu-Trp-Ala-Arg- (SEQ ID NO:16), or -Pro-Leu-Ala-Tyr-Trp-Ala-Arg- (SEQ ID NO:17), where Z is an amino acid.

11. (Withdrawn) A wound dressing material according to claim 7, wherein the protease is a gelatinase and wherein the oligopeptidic sequence comprises or consists of -Pro-LeuGly-Met-Trp-Ser-Arg- (SEQ ID NO:18).
12. (Withdrawn) A wound dressing material according to claim 7, wherein the protease is thrombin and wherein the oligopeptidic sequence comprises or consists of -Gly-Arg-Gly-Asp- (SEQ ID NO:19), -Gly-Gly-Arg-, -Gly-Arg-Gly-Asp-Asn-Pro- (SEQ ID NO:20), -Gly-Arg-Gly-Asp-Ser- (SEQ ID NO:21), -Gly-Arg-Gly-Asp-Ser-Pro-Lys- (SEQ ID NO:22), -Gly-Pro-Arg-, -Val-Pro-Arg-, or -Phe-Val-Arg-.
13. (Withdrawn) A wound dressing material according to claim 7, wherein the protease is stromelysin and wherein the oligopeptidic sequence comprises or consists of -Pro-TyrAla-Tyr-Trp-Met-Arg- (SEQ ID NO:23).
14. (Previously presented) A wound dressing material according to claim 7, wherein the therapeutic agent is a reactive oxygen scavenger, an antimicrobial agent, a pain relieving agent, an antiseptic, an analgesic, or a local anaesthetic.
15. (Previously presented) A wound dressing material according to claim 14, wherein the therapeutic agent comprises a reactive oxygen scavenger selected from the group consisting of antioxidant phenol derivatives, vitamin E, methyl peroxide antioxidants, stilbenes, gallocatechins, ubiquinol, retinoids, vitamin A, vitamin C, N-acetyl cysteine,

selenium and its compounds, zinc and its compounds, glutathione, carotenoids, papai, thioproline, albumin, chlorophyllin, antioxidant dyestuffs, and mixtures thereof.

16. (Previously presented) A wound dressing material according to claim 15, wherein the enzyme inhibitor is selected from the group consisting of Tissue Inhibitor of Metalloproteinase (TIMP), 4-(2-aminoethyl)benzenesulfonyl fluoride AEBSF, antithrombin, (p-Amidinophenyl)methanesulfonyl fluoride APMSF, Aprotinin, diisopropylfluorophosphate DFP, phenyl methyl sulfonyl fluoride PMSF, Antipain, Chymostatin, Leupeptin, Tosyl-lysine chloromethylketone TLCK, Tosyl-phenyl chloromethylketone TPCK, L-trans-epoxysuccinylleucylamido (4-guanidino) butane E-64, Amastatin, Bestatin, Diprotin, Ethylenediamine tetra-acetic acid (EDTA), pepstatin and mixtures thereof.
17. (Previously presented) A wound dressing comprising a wound dressing material according to claim 1.
18. (Canceled)